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SUBSTITUTE FORM PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE	Attorney Docket No.	50154/004002	
	PATENT AND TRADEMARK OFFICE	Serial No.	10/047,404	
		Applicant	Hubbell et al.	
STATEMEN	ON DISCLOSURE T BY APPLICANT	Filing Date	October 19, 2001	
(Use several sheets if necessary)		Group	1632	
(37 C.F.R. § 1.98(b))		IDS Filed	December 8, 2003	

	U.S. PATENTS					
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date (If Appropriate)
~~	5,268,305	12/07/93	Ribi et al.		-	
~~	5,294,690	3/15/94	Iguchi et al.			
<u></u>	5,330,911	7/19/94	Hubbell et al.	_		
m	5,410,016	4/25/95	Hubbell et al.	_		
m	5,427,915	6/27/95	Ribi et al.	_		
m	5,446,090	8/29/95	Harris	_		
~	5,529,914	6/25/96	Hubbell et al.	_		
m	5,567,422	10/22/96	Greenwald			
~	5,573,934	11/12/96	Hubbell et al.	_		
~	5,575,815	11/19/96	Slepian et al.			
~	5,612,390	3/18/97	Iguchi, et al.			
~	5,635,207	6/3/97	Grinstaff et al.		 	
m	5,648,506	7/15/97	Desai et al.	_		
m	5,752,974	5/19/98	Rhee et al.			
m	5,801,033	9/1/98	Hubbell et al.			
m	5,817,840	10/6/98	Nicolaou et al.			
M	5,852,182	12/22/98	Cook et al.			
1~	5,858,746	1/12/99	Hubbeil et al.			
~~	5,874,500	2/23/99	Rhee et al.			
~	5,880,131	3/9/99	Greenwald et al.	_		
<u>/-</u>	5,897,955	4/27/99	Drumheller			
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Sheet 2 of 4 (MODIFIED) Attorney Docket No. 50154/004002 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE Serial No. 10/047,404 Applicant Hubbell et al. INFORMATION DISCLOSURE STATEMENT BY APPLICANT Filing Date October 19, 2001 (Use several sheets if necessary) Group 1632 (37 C.F.R. § 1.98(b)) IDS Filed December 8, 2003

m	5,932,462	8/3/99	Harris et al.	
~~	5,945,457	8/31/99	Plate, et al.	
~	5,965,588	10/12/99	Vasquez et al.	
~	2003-0044468	3/6/2003	Cellesi et al.	

	FOR	REIGN PATENT	OR PUBLISHED FOREIGN PATEN	NT APPLICATION	ON	
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
m	WO 95/13312	18.05.95	WIPO			
w	WO 97/22371	26.06.97	WIPO			
2	WO 99/22770	14.05.99	WIPO			
M	WO 99/34833	15.7.99	WIPO			
~	WO 99/14259	25.3.99	WIPO			
~~	WO 00/09087	24.2.00	WIPO			

	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)
~~	Baker, "Controlled Release of Biologically Active Agents," Bruck, ed., p. 84-131 John Wiley and Sons, New York (1987).
~	Ballini et al., "Amberlyst A-27, and Efficient Heterogeneous Catalyst for the Michael Reaction of Nitroalkanes with β-Substituted Alkene Acceptors," J. Org. Chem. 61:3209-3211 (1996).
<i>~~</i>	Boyland et al., "Enzymes Catalysing Conjugations of Glutathione with Alpha-beta-unsaturated Carbonyl Compounds," Biochem. J. 109:651-661 (1968).
~	Chasseaud, "Distribution of Enzymes that Catalyse Reactions of Glutathione with Alpha beta-unsaturated Compounds," Biochem. J. 131:765-769 (1973).
0	Deutsch et al., "Synthesis of Congeners and Prodrugs. 3. Water-Soluble Prodrugs of Taxol with Potent Antitumor Activity," Journal of Medicinal Chemistry 32:788-792 (1989).
~/	Dumitriu et al., "Polymeric Drug Carriers," In Polymeric Biomaterials, Dumitriu, ed., p. 435-449 and 466-724, Marcel Dekker, New York (1994).
~ b	Duncan et al., "Soluble Synthetic Polymers as Potential Drug Carriers," Adv. In Polym. Sci. 57:51-101 (1984).
EXAMINER	DATE CONSIDERED 6-04
EXAMINER: In	itial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this ext communication to applicant.

Sheet 3 of 4

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	SUBSTITUTE FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE	Attorney Docket No.	50154/004002
	(MODIFIED)	PATENT AND TRADEMARK OFFICE	Serial No.	10/047,404
			Applicant	Hubbell et al.
	INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		Filing Date	October 19, 2001
ļ			Group	1632
L	(37 C.F.R. § 1.98(b))		IDS Filed	December 8, 2003

p	Eisele et al., "Kinetics of Photocrosslinking Reactions of a DCPA/EA Matrix in the Presence of Thiols and Acrylates," J. Polym. Sci., Polym. Chem. Ed. 35:2333-2345 (1997).						
~~	Fan et al., "Molecular recognition and catalysis: incorporation of an 'oxyanion hole' into a synthetic receptor," New J. Chem. 21(1):81-85 (1997).						
M	Friedman et al., "Relative Nucleophilic Reactivities of Amino Groups and Mercaptide Ions in Addition Reactions withα,β-Unsaturated Compounds," J. Am. Chem. Soc. 87(16):3672-3682 (1965).						
w	Greenwald et al., "Drug Delivery Systems: Water Soluble Taxol-2'-Poly(ethylene glycol) Ester Prodrugs-Design and in Vivo Effectiveness," J. Med. Chem. 39:424–431 (1996).						
m	Ghandehari et al., "In Vitro Degradation of pH-sensitive Hydrogels Containing Aromatic Azo Bonds," Biomaterials 18:861-872 (1997).						
w	Hern et al., "Incorporation of adhesion peptides into non-adhesive hydrogels useful for tissue resurfacing," J. Biorned. Mater. Res. 39:266-276 (1998).						
~	Hirai et al., "pH-induced Structure Change of Poly (vinyl alcohol) Hydrogel Crosslinked with Poly (acrylic acid)," Angewandte Makromolekulare Chemie 240:213-219 (1996).						
w	Ishihara et al., "Tris(pentafluorophenyl) boron as an Efficient, Air Stable, and Water Tolerant Lewis Acid Catalyst," Bull. Chem. Soc. Jpn. 68:1721-1730 (1995).						
~	Kawai et al., "New Application of Solid Acid to Carbon-Carbon Bond Formation Reactions: Clay Montmorillonite-Catalyzed Aldol Reactions of Silyl Enol Ethers with Aldehydes and Acetals," Bull. Chem. Soc. Jpn. 61:1237-1245 (1988).						
N	Kito et al., "Biocompatible Coatings for Luminal and Outer Surfaces of Small-caliber Artificial Grafts," Journal of Biomedical Materials Research 30:321-330 (1996).						
~	Lau et al., "Conjugation of Doxorubicin to Monoclonal Anti-carcinoembryonic Antigen Antibody via Novel Thioldirected Cross-linking Reagents," Bioorganic & Medicinal Chemistry 3:1299-1304 (1995).						
\sim	Lau et al., "Novel Doxorubicin-Monoclonal Anti-carcinoembryonic Antigen Antibody Immunoconjugate Activity in vitro," Biorganic & Medicinal Chemistry 3:1305-1312 (1995).						
· ~	Mathur et al., "Methods for Synthesis of Hydrogel Networks: A Review," Journal of Macromolecular Science-Reviews in Macromolecular Chemistry and Physics C36(2):405-430 (1996).						
~	Moghaddam et al., "Molecular Design of 3-Dimensional Artificial Extracellular-matrix: Photosensitive Polymers Containing Cell Adhesive Peptide," Journal of Polymer Science: Part A: Polymer Chemistry 31:1589-1597 (1993).						
m	Morpurgo et al., "Preparation and Characterization of Poly(ethylene glycol) Vinyl Sulfone," Bioconjugate Chern. 7:363-368 (1996).						
~	Pato et al., "Polymers containing enzymatically degradable bonds, 9 ^{a)} Chymotrypsin catalyzed hydrolysis of a p- nitroanilide drug model, bound via oligopeptides onto poly(vinylpyrrolidone-co-maleic anhydride)," Makromol. Chem. 185:231-237 (1984).						
N	Pathak et al., "Rapid Photopolymerization of Immunoprotective Gels in Contact with Cells and Tissue," Journal of the American Chem. Society 114:8311-8312 (1992).						
EXAMINER	DATE CONSIDERED 6-04						
EXAMINER: In form with the n	itial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this ext communication to applicant.						

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~	Petka et al., "Reversible Hydrogels from Self-Assembling Artificial Proteins," Science 281:389-392 (1998).
1	Pitt et al., "Controlled Drug Delivery," In Biodegradation of Polymers, Basic Concepts, Volume 1, p. 53-80, CRC Press, Boca Raton, Florida (1983).
~	Romanowska et al., "Michael Additions for Syntheses of Neoglycoproteins," Methods in Enzymol. 242:90-101 (1994).
~	Sawhney et al., "Bioerodible Hydrogels Based on Photopolymerized Poly(ethylene glycol)-co-poly(α-hydroxy acid) Diacrylate Macromers," Macromolecules 26:581-587 (1993).
~	Tanaka et al., "Michael-type Addition of Illudin S, a Toxic Substance from Lampteromyces japonicus, with Cysteine and Cysteine-containing Peptides In Vitro, " Chem. Pharm. Bull, 44:273-279 (1996).
~~	West et al., "Comparison of Covalently and Physically Cross-linked Polyethylene Glycol-based Hydrogels for the Prevention of Postoperative Adhesions in a Rat Model," Biomaterials 16:1153-1156 (1995).
m	Wright et al., The Chemistry and Pharmacology of Taxol and Its Derivatives, Farina, ed., p. 110-130 and 165-300, Elsevier, New York (1995).
~	Zalipsky et al., "Attachment of Drugs to Polyethylene Glycols," Eur. Polym. J. 19:1177-1183 (1983).
	Zhao et al., "Novel Degradable PEG Esters for Drug Delivery: Synthesis and Characterization," Polymer Reprints 38:526-527 (1997).

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DATE CONSIDERED

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.

Sheet 1 of BSTITUTE FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE Attorney Docket No. 50154/004002 PATENT AND TRADEMARK OFFICE (MODIFIED) Serial No 10/047,404 Jeffrey A. Hubbell et al. Applicant INFORMATION DISCLOSURE October 19, 2001 STATEMENT BY APPLICANT Filing Date (Use several sheets if necessary) Group 1632 (37 C.F.R. §1.98(b)) **IDS Filed** August 6, 2002 Customer No. 21559 FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION Examiner's Document Publication Class Subclass Country or Translation Initials Number Date Patent Office (Yes/No) 03/13/74 PCT GB 1,348,045 A WO 00/44808 8/3/00 PCT WO 01/92584 A1 12/6/01 PCT OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION) EXAMINER DATE CONSIDERED EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.

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ľ	OTHER DOCU	MENTS (INCLI	UDING AUTHOR, TITLE,	DATE, PLAC	E OF PUB	LICATION)	i.	٦,
M	Aida et al., "Zinc I	V-substituted Pi	orphyrins as Novel Initiato 3887-3892 (1990).				ariza tions of	┪.
M	Blume et al., "Spe the Ends of the Po Biophys. Acta., 11		with Poly(ethylene glycol) s Combines Effective Targ 193).	-modified Lipo let Binding wi	osomes: Co th Long Cir	oupling of Ho culation Time	ming Devices to es," Biochim	-
W	Booth et al., "Effect Copolymers in Aqu	cts of Block Arc ueous Solution,	hitecture and Composition "Macromol. Chem. Rapid	n on the Asso I Commun., 2	ciation Pro 1:501-527	perties of Po. (2000).	ly(oxyalkylene)	1
N			ough Vesicles Made from				143-1146	
~/	Gabizon, "Targetin Liposomes: In Vitre	g Folate Recep Studies," Biod	otor with Folate Linked to conjugate Chem. 10:289-	Extremities of 298 (1999)	Poly(ethyl	ene glycol)-C	Grafted	1
~	Inoue et al., "Gene Therapy of Human Bladder Cancer with Adenovirus-mediated Antisense Basic Fibroblast Growth Factor," Clinical Cancer Research, 6:4422-4431 (2000).							
2	Lasic et al., ed. Stealth Liposomes, Chapters 2, 4, and 9, CRC Press: Boca Raton, FL, (1995).							
~	Mortensen, "Block Copolymer in Aqueous Solution: Micelle Formation and Hard-sphere Crystallization," Prog.							
~	Torchilin et al., "Po Longevity," Biochin	ly(ethylene glyc n. Biophys. Acta	col) on the Liposome Surfa a, 1195:11-20 (1994).	ace: on the M	echanism (of Polymer-co		
~~	Watanabe et al., "First Example of Photoinduced Copolymerizability Enhancement. Copolymerization of Epoxide and Episulfide Initiated with Zinc N-substituted Porphyrin under Visible Light Irradiation," Macromolecules, 24:3970-3972 (1991).							
m	Won, "Giant Wormlike Rubber Micelles." Science, 283 960-963, (1999).							
~	Yu et al., "Bilayer Morphologies of Self-assembled Crew-cut Aggregates of Amphiphilic PS-b-PEO Diblock Copolymers in Solution," <i>Macromolecules</i> , 31:3509-3518, (1998).							
~	Zalipsky et al., "Peptide Atlachment to Extremities of Liposomal Surface Grafted PEG Chains: Preparation of the Long-circulating Form of Laminin Pentapeptide, YIGSR," Bioconjugate Chem., 6:705-708 (1995).							
	Zalipsky, "Long-circulating, Polyethylene Glycol-grafted Immunoliposomes," J. Controlled Release, 39:153-161 (1996).							
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